

amongst Poduræ. The Linnæan species is, no doubt, a true *Podura*, probably an *Anura*, which also agrees with the habits of life which he ascribes to his species. Schrank's "Gehender Springschwanz" may be a *Campodea*, though now it would be impossible to say which; but in adducing as a synonymous name *Podura ambulans*, L., Schrank committed a mistake, which, of course, ought not to be imitated.

Campodea fragilis is frequent in the neighbourhood of Copenhagen, in moist black earth; under stones it is often seen in troops, which quickly disperse when the light is let in upon them. It lives, at least partly, on dead insects, as I have often found in its stomach scales of butterflies and other remains of insects which it could not have attacked or overcome alive.

BIBLIOGRAPHICAL NOTICES.

British Conchology. Vol. IV. *Marine Shells, in continuation of the Gastropoda as far as the Bulla Family*. By JOHN GWYN JEFFREYS, F.R.S., F.G.S., &c. Van Voorst, 1867.

THIS is by far the most valuable volume of Mr. Jeffreys's work yet published. It contains descriptions of the most interesting and at the same time the most difficult families of Marine Gastropoda, including certain genera which the author has made peculiarly his own, and on which he is more competent than any other conchologist to treat; and there is not wanting evidence in this and in preceding volumes of the great advantage which the possession of immense series of specimens collected from all parts of the coast, for examination and comparison, gives him in the preparation of his work. Our first impulse was to turn to the genus *Odostomia*, in the hope of finding that the extreme and wholly insurmountable difficulty which every student of Forbes and Hanley has found in the discrimination of the members of that genus might be in some degree removed by a wholesome reduction in the number of so-called specific forms. It is satisfactory to find that this is the case. *Warrenii* is united with *obliqua*; *alba*, *dubia*, *nitida*, and *glabrata* take their place as varieties of *rissoides*; *rufescens* is joined with *scalaris*; *fulvocincta* with *rufa*; *formosa* is expunged altogether, as not being British; and *affinis* is regarded as a variety of *acicula*, as is also the form described a few years ago in the 'Annals' by the author under the name *Eulimella obeliscus*. With one exception, on which some doubt may be entertained, we fully concur in the justice of these elisions, and believe, moreover, that future observation will result in the process being carried yet a little further. It will be observed that *Chemnitzia* and *Eulimella* have here been spoken of as *Odostomia*, the fact being that Mr. Jeffreys has discarded the former genera and grouped the species in *Odostomia*. Now it is true that there are certain osculant forms which create difficulties in the definition of

the genera; yet at page 114 we find a division (a far more satisfactory division, to our mind, than that of Forbes and Hanley) of the species into three sections, for which the generic names might have been advantageously retained. The name *Odostomia* is altogether inappropriate to the toothless forms of *Chemnitzia* and *Eulimella*.

The volume contains descriptions of one hundred and eighty-two species; whereas Forbes and Hanley, in the same families, give only one hundred and sixty-nine; but, inasmuch as sixteen of the forms described by the latter are here struck out of our fauna, we find that an addition has been made to this section of our Mollusca of no less than twenty-nine species since the publication of the 'History of the British Mollusca.' The sixteen expunged forms are:—*Ianthina exigua*, Bruguière, and *pallida*, Harvey, as not having been found alive upon our coasts; *Scalaria grœnlandica*, fossil; *Natica Kingii*, Forbes, as an exotic freshwater species erroneously recorded; *Lamellaria tentaculata*, Montagu, as being the male of *L. perspicua*, Linn.; *Cylichna conulus*, S. Wood, and *strigella*, Lovén, as synonymous with *C. strigella*; together with the nine *Odostomia*, *Chemnitzia*, and *Eulimella* already referred to.

The following are the twenty-nine species which are here described as inhabitants of the British seas, but which have no place in the work of Forbes and Hanley:—

Rissoa Jeffreysii, Waller. Shetland.

R. albella, Lovén. This is the *R. inconspicua*, var. *tenuis*, of Forbes and Hanley. It has been found at Southampton and on various parts of the western coast, and at Shetland.

Aclis Walleri, Jeffreys. Deep sea, Shetland.

Odostomia minima, Jeffreys. Guernsey, Falmouth, Hebrides, and Shetland.

Odostomia Lukisi, Jeffreys. }

O. albella, Lovén. }

O. diaphana, Jeffreys. }

O. umbilicaris, Malm. }

Each of these species has been found in several localities.

Eulina intermedia, Cantraine. Widely distributed.

E. stenostoma, Jeffreys. The Haaf, Shetland.

Torellia vestita, Jeffreys. A single dead specimen on east coast of Shetland.

Cerithiopsis Barleei, Jeffreys. Plymouth, Falmouth, Cork, and Galway.

C. pulchella, Jeffreys. Guernsey, Devon, Cornwall, and Antrim.

C. costulata, Möller. Deep water, Shetland.

Triton nodifer, Lamarck, and *T. cutaceus*, Linn. Guernsey. Two very fine Mediterranean forms.

Fusus Islandicus, Chemnitz. Two specimens from the Shetland Haaf and one from Wexford. This is the typical *Islandicus*, a much finer species than that described by Forbes and Hanley under that name, which in Mr. Jeffreys's work is called *F. gracilis*, Da Costa.

Fusus buccinatus, Lamarck. Allied to *F. propinquus*, with which it has hitherto been confounded. It is a much larger and coarser form;

and has a more southern range. It may be questioned whether the two are distinct. Is not this a case of exception to our author's favourite theory that our Mollusca attain larger development in northern latitudes?

Nassa nitida, Jeffreys. The Harwich *Nassa*, which has hitherto been regarded (and, we think, rightly) as a variety of *N. reticulata*.

Columbella haliaëti, Jeffreys. An interesting species from the Shetland Haaf.

Defrancia reticulata, Renier. Rare, but ranging from the Channel Islands to Shetland. A white variety of this species is the *Mangelia purpurea*, var. *asperrima*, of F. & H.; one of the loveliest of British shells.

Pleurotoma rugulosa, Philippi. Cornwall. Perhaps scarcely sufficiently distinct from *P. costata*.

P. lævigata, Philippi. Of southern and south-western range. Regarded by Forbes and Hanley as a variety of *P. nebula*.

P. nivalis, Lovén. A very fine Norwegian species, of which a few examples have been dredged on the Shetland Haaf.

Cylichna alba, Brown. A fine addition to our fauna from Shetland.

Utriculus ventrosus, Jeffreys. Only one specimen known, dredged by Mr. Barlee in the Sound of Skye.

U. expansus, Jeffreys. Another Shetland treasure; and the 'Annals' of last month records a third addition to this genus, also from Shetland, *Utriculus globosus*, Lovén, which has been discovered by the Shetland Dredging Committee, during the past summer, in St. Magnus Bay.

Philine angulata, Jeffreys. Antrim, Hebrides, Shetland, and Aberdeenshire.

P. nitida, Jeffreys. Skye and Haroldswick Bay, Shetland.

These are not inconsiderable additions to have been made to our fauna in this best-worked-up department of marine zoology during the few years which have elapsed since the publication of Forbes and Hanley's 'History.'

The observations which follow the descriptions of the species are always of value, and often very full and interesting. We are frequently astonished at the mass of information here briefly condensed. It has been Mr. Jeffreys's aim to popularize his subject and to make a readable book. In the former volumes there were to be found frequent digressions from the direct history of the species on which he was writing, and the pages were thickly strewn with poetical quotations. In the present volume such quotations and digressions, which were tiresome to the scientific reader, are much less frequent; and, the space thus gained being filled with yet larger stores of scientific information, the result is an increase, not a diminution, of interest. Such bibliographical and biological notes as we find, for example, on *Ianthina*, *Purpura*, or *Buccinum* require no extraneous accretions to set them off; they are replete with instruction and interest in themselves.

The following closing words of volume iv. are well worth quoting, since the issue of plates to illustrate the work was alone required to make it take its place as the standard authority on the British Mollusca. We trust that no pains will be spared in the execution of these drawings. The generic illustrations which have been published in the earlier volumes have in many instances fallen short of what they might have been; and even in the present volume, some of the engravings (for example, the figures of plate 7) are hardly worthy of that accurate artist, Mr. G. B. Sowerby:—

“And now, good reader, I should be sorry if you have complained of my being too voluminous. I never professed to make this a manual; nor have I yet quite done. Let me remind you of the advice given by Seneca (*De Ira*, lib. iii. c. 31. § 3), ‘Age potius gratias pro his quæ accepisti: reliqua expecta, et nondum plenum te esse gaude. Inter voluptates est, superesse quod speres.’

“The next volume will complete the work, and contain an account of the few remaining Pleurobranchiata, the Nudibranchs (by Mr. Alder), the marine Pulmonobranchs, the Pteropods, and the Cephalopods, a Supplement to the volumes already published, and other useful matter, besides plates (plain and coloured) by Mr. Sowerby, to represent all the species and remarkable varieties of British shells. Most of these plates are engraved, and the colouring is in progress.”

Mind in Nature; or, the Origin of Life and the Mode of Development of Animals. By HENRY JAMES-CLARK, A.B., B.S., Adjunct Professor of Zoology in Harvard University, Cambridge, Mass., &c. Illustrated; pp. v-315. D. Appleton & Co., New York. 1865.

THIS work has scarcely met with the attention, in this country, which it seems to deserve. It contains much interesting information respecting the lower animals, which is expressed in a clear and pleasing style.

The Origin of Life is considered in the first five chapters, in the course of which the author adduces some experiments in defence of the hypothesis of *spontaneous generation*, and propounds his theory of the egg,—viz. that it is a “bipolar animal,” “a globular accretion of two kinds of fluids, albumen and oil, which are always situated at opposite sides or poles,” and separated more or less distinctly from each other. Amongst the most remarkable modes by which an individual existence arises cited, is the derivation of vibrioform bodies from the fibres of decomposing muscular and tendinous tissue. His assertion, at page 101, that “human digestion makes human flesh out of the *decomposed* meat of many different kinds of animals,” requires some qualification, since the word *decomposition* is employed in the same paragraph somewhat in the sense of putrescence. The meaning of the word is wrested for the defence of spontaneous generation.

The speciality of the second part is his treatment of the Protozoa. “*The type of this division*,” he writes, “is found in its relation to